Personality and Psychological Well-Being of Canadian Forces Officer Candidates: The Role of Coping

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ABSTRACT

*There is evidence to suggest that both personality and coping strategies that individuals adopt to deal with stressors play an important role in the psychological well-being of military personnel. The overall goal of the study was to understand the multifaceted relationships between personality, coping with stress, and psychological well-being in the military context. Specifically, the study examined various mechanisms by which coping strategies might have influenced the link between personality and psychological well-being or perception of basic training stress of CF Officer Candidates undertaking their basic Officer training (*N*=200). Multiple regression analyses demonstrated that both personality and coping explained significant and unique proportions of variance in psychological well-being (life satisfaction and psychological health symptoms) and perceptions of training (training satisfaction and training stress). Coping was found to play an important role in psychological well-being and training perceptions of CF candidates, over and above that of personality. Furthermore, hierarchical regression analyses and bootstrapping techniques demonstrated that coping played both a moderating and a partial mediating role in the path between personality and psychological well-being, providing evidence for the differential choice-effectiveness model. The results suggest that providing coping training to CF candidates could be beneficial. Training, focusing on the effectiveness of particular coping strategies (e.g., problem-solving and social support seeking), could be offered to individuals starting their basic training. In addition, training that focuses on stress management and coping, including approaches of setting priorities to balance work and family within the context of the military environment could be beneficial. Further implications of the findings and future research suggestions are discussed.*

1.0 INTRODUCTION

Psychological well-being research focuses on the factors that predispose individuals to experience their lives in more positive or more negative ways [1]. It has been argued that individuals possess a unique ability to maintain or regain a high level of well-being even in high-stress situations [2, 3]. Researchers have suggested that the differences in psychological well-being could be attributed to individual differences. There is a consensus within the research on stress that coping with stressful events as well as an individuals' personality play important roles in psychological well-being outcomes [4]. Multiple studies have been conducted examining the links between personality and psychological well-being [e.g., 5]. Various personality traits were found to be significantly correlated with affect [e.g., 6] and life satisfaction [7]. Personality has been found to consistently predict variance in psychological well-being in the general population and among military personnel [e.g., 8, 9].

Report Documentation Page

Form Approved
OMB No. 0704-0188

1. REPORT DATE	2. REPORT TYPE	3. DATES COVERED
APR 2011	**N/A**	**-**

4. TITLE AND SUBTITLE
Personality and Psychological Well-Being of Canadian Forces Officer Candidates: The Role of Coping

5a. CONTRACT NUMBER

5b. GRANT NUMBER

5c. PROGRAM ELEMENT NUMBER

6. AUTHOR(S)

5d. PROJECT NUMBER

5e. TASK NUMBER

5f. WORK UNIT NUMBER

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)
Defence Research and Development Canada - DGMPRA Department of National Defence 101 Colonel By Drive Ottawa, Ontario, Canada K1A 0K2

8. PERFORMING ORGANIZATION REPORT NUMBER

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)

10. SPONSOR/MONITOR'S ACRONYM(S)

11. SPONSOR/MONITOR'S REPORT NUMBER(S)

12. DISTRIBUTION/AVAILABILITY STATEMENT
Approved for public release, distribution unlimited

13. SUPPLEMENTARY NOTES
See also ADA578905. Mental Health and Well-Being across the Military Spectrum (Bien-être et santé mentale dans le milieu militaire). RTO-MP-HFM-205

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There is evidence to suggest that both personality and coping strategies that individuals adopt to deal with stressors play an important role in the psychological well-being of military personnel. The overall goal of the study was to understand the multifaceted relationships between personality, coping with stress, and psychological well-being in the military context. Specifically, the study examined various mechanisms by which coping strategies might have influenced the link between personality and psychological well-being or perception of basic training stress of CF Officer Candidates undertaking their basic Officer training (N=200). Multiple regression analyses demonstrated that both personality and coping explained significant and unique proportions of variance in psychological well-being (life satisfaction and psychological health symptoms) and perceptions of training (training satisfaction and training stress). Coping was found to play an important role in psychological well-being and training perceptions of CF candidates, over and above that of personality. Furthermore, hierarchical regression analyses and bootstrapping techniques demonstrated that coping played both a moderating and a partial mediating role in the path between personality and psychological well-being, providing evidence for the differential choice-effectiveness model. The results suggest that providing coping training to CF candidates could be beneficial. Training, focusing on the effectiveness of particular coping strategies (e.g., problem-solving and social support seeking), could be offered to individuals starting their basic training. In addition, training that focuses on stress management and coping, including approaches of setting priorities to balance work and family within the context of the military environment could be beneficial. Further implications of the findings and future research suggestions are discussed.

15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT **unclassified**	b. ABSTRACT **unclassified**	c. THIS PAGE **unclassified**	**SAR**	**24**	

Standard Form 298 (Rev. 8-98)
Prescribed by ANSI Std Z39-18

Knowing what individual characteristics could buffer individuals against the negative impact of stress, which could make them less prone to developing psychological health problems, would be especially valuable in the military context, due to its potentially stressful demands [10, 11, 12]. Basic training, obligatory for Canadian Forces (CF) candidates, can become stressful. Individuals who are not psychologically fit for a military environment may not be able to get through the training or may realize that they are unwilling or unable to accept military demands at a later stage [12]. Stress associated with military demands among recruits who are not psychologically fit may lead to attrition and/or development of psychological health problems [11]. Therefore, an ability to predict psychological well-being has important practical implications for military organizations, including reduced costs of selection, reduced attrition, and increased psychological well-being of military personnel. This study examined the role of both personality and coping in the psychological well-being of CF Officer Candidates (OCdts).

• Stress and Coping

There is evidence to suggest that stress has important implications for the psychological well-being of military personnel. Miller et al. [13] found that both war experiences and daily stressors were important and independent predictors of various mental health outcomes, including depression, post-traumatic stress disorder (PTSD), impaired functioning, and general psychological distress. Thus, in evaluating the stress perceptions and psychological well-being of CF candidates taking basic training, it is critical to consider the individual differences among candidates that may influence their responses to stressors.

Within the stress and coping framework, stress is defined as a relationship between the person and the environment that is appraised by the person as relevant to his or her well-being and in which the person's resources are taxed or exceeded [14]. Cognitive appraisal of the event and coping are critical steps in the stressor-person relationships and impact both the immediate and long-term outcomes for the person. The appraisal of an event consists of two interdependent processes, primary and secondary appraisals; the primary appraisal involves the person's judgment of whether an event is irrelevant, positive, or stressful, whereas the secondary appraisal involves the person's evaluation of his or her coping resources and options [15]. A relationship between ineffective coping and poor health outcomes has been established both in animal and human studies [e.g., 16]. Many researchers have demonstrated that a failure to cope with stressful or traumatic situations leads to psychological problems, including depression, acute stress disorder (ASD) and subsequent PTSD [17, 18, 19, 20, 21, 22, 23, 24]. Billings and Moos [25] found that depressive mood is positively correlated with the avoidance mode of coping, whereas active cognitive coping is correlated with a less depressive mood. The majority of the researchers find active coping, and specifically problem-solving, to be associated with lower mental distress, and passive coping, such as withdrawal and avoidance, to be associated with higher mental distress. In addition, social support seeking is believed to be the most adaptive coping strategy against mental distress, particularly among women [26, 27, 28, 29].

Although there is a consensus in the scientific research that effective coping is an important determinant of health and psychological well-being, personality was proposed to affect psychological well-being by influencing the reactivity to stressful events [30]. Furthermore, multiple researchers believe that coping is not an independent process, but a direct function of an individual's personality [31, 32, 33, 34, 35, 36, 37, 38]. Whether coping is a mediator in the path between personality and psychological well-being [e.g., 30] or an independent predictor [e.g., 39], the role of personality in stress, coping, and the psychological well-being process deserves research attention.

• The Interrelationships between Personality, Coping, and Psychological Well-Being

According to the model proposed by Bolger and Zuckerman [30], the stress process has two fundamental stages: stressor exposure and stressor reactivity. Whereas stressor exposure is the extent to which a person experiences a stressful event, stressor reactivity is the extent to which a person shows emotional or

physical reactions to a stressful event. It has been suggested that personality dispositions influence the path between negative life events and psychological well-being while affecting both exposure to stressors and reactivity to stressors [30]. For example, individuals with certain personality traits, such as having high scores on risk taking or impulsivity, may have a greater exposure to stressors than those having lower scores on these personality traits. In addition, consistent with the stress reactivity model, Engelhard and van den Hout [40] suggested that individuals high in neuroticism may experience more negative recollections about military service, which in turn may contribute to psychological health problems (e.g., PTSD). Personality differences in reactivity to stressors can be due to differential choice of coping strategies [30]. Indeed, research has shown that individuals have a preferred style of responding to life challenges and stressors [41, 42, 43, 44]. Furthermore, it has been shown that personality variables predicted the choice of coping strategies and that these strategies, in turn, lead to differential stress outcomes [e.g., 31, 32, 33, 35, 36, 37]. It was similarly found that coping mediated the path between personality and psychological well-being of military personnel [45]. Bolger and Zuckerman [30] called this mediating role of coping, in the path between personality and stress outcomes, a differential coping-choice model.

Although many researchers believe that coping choice is the main mechanism through which personality affects stressor reactivity [31, 32, 33, 35, 36, 37], there is other evidence suggesting that personality may have no effect on coping choice while coping still explains the path between personality and reactivity. According to Bolger and Zuckerman [30], some individuals may experience psychological health problems following a stressful event not because they choose maladaptive strategies but because they choose strategies that are ineffective for them alone. In other words, there may be an interaction between personality traits and coping strategies an individual adopts to cope with stressors when explaining the variance in psychological health. This possibility is referred to as the differential coping-effectiveness model [30]. Some findings suggest that both coping choice and coping effectiveness are important for explaining individual differences in psychological well-being under stress [46]. To examine these possibilities, a study was conducted to examine the interrelationships between personality, coping, and psychological well-being among military personnel. Specifically, it was hypothesized that both personality and coping would have significant and unique contributions to the psychological well-being of OCdts. In addition, according to the differential coping-effectiveness model, it was hypothesized that certain coping strategies would buffer the negative impact of neuroticism on the psychological well-being of OCdts. Finally, according to differential coping-choice model, it was hypothesized that coping would mediate the path between neuroticism and psychological well-being of OCdts.

2.0 METHOD

2.1 Participants and Procedures

Questionnaires were administered to 200 OCdts who were taking their Basic Officer Training Course (BOTC) in St Jean, Quebec. Out of those who provided information on their sex, there were 154 (77.0%) males and 37 (18.5%) females. One hundred fifteen (57.1%) of the individuals chose to complete the questionnaires in English while 85 (42.9%) chose to complete the questionnaires in French. It was explained to the participants that the data would be anonymous and would have no impact on their military careers.

2.2 Measures

2.2.1 Personality Inventory

The Trait-Self Descriptive Personality Inventory (TSD-PI) is a 75-item paper-and-pencil measure of personality [47]. The TSD-PI scale has five subscales representing each of the five factors of personality.

Each subscale consists of 15 items, both adjectives and statements. The scores on each subscale range between 1 ('extremely uncharacteristic of me') and 7 ('extremely characteristic of me'). The reverse-coded items were recoded before the responses were averaged for each subscale. The Cronbach's alpha or internal reliability was high for each subscale (neuroticism alpha = .91, extraversion alpha = .88, openness to new experiences alpha = .90, agreeableness alpha = .88, and conscientiousness alpha = .89).

2.2.2 Life Satisfaction Scale

Life satisfaction was assessed with the Satisfaction with Life Scale [SWLS; 48]. The SWLS is a five-item measure that asks respondents to rate their global life satisfaction from their subjective perspective. The responses ranged from 1 (strongly disagree) to 6 (strongly agree), with higher scores indicating greater satisfaction with life (Cronbach's alpha = .75). The items were summed to obtain an overall score.

2.2.3 Health Symptoms

The 12-item abbreviated version of the General Health Questionnaire [GHQ-12; 49] was used to measure health symptoms. This measure asks whether participants have recently experienced events such as a loss of sleep due to worry or inability to concentrate on whatever they are doing. Responses were rated on a 4-point scale ranging from not at all (1) to much more than usual (4). The reliability coefficient was only moderate (Cronbach's alpha =.54).

2.2.4 Training Stress Perception

Training stress was assessed by the extent to which the training was stressful for the individual: "All in all, how stressful has the training you have just completed been for you?" The rating for this question was made on a 5-point scale ranging from 1 (not stressful at all) to 5 (very stressful).

2.2.5 Coping

A multidimensional scale of coping [50] that comprises 50 items was used in this study. Respondents indicated whether they had demonstrated each of the behaviours as a way of dealing with stressors in the past month, using a rating scale from 0 (never) to 4 (almost always). In this study, a moderate to high reliability was found for 13 out of 14 coping subscales, including problem-solving (Cronbach's alpha=0.78), cognitive restructuring (Cronbach's alpha=0.76), active distraction (Cronbach's alpha=0.70), avoidance (Cronbach's alpha=0.80), rumination (Cronbach's alpha=0.89), humour (Cronbach's alpha=0.86), social-support seeking (Cronbach's alpha=0.79), emotional expression (Cronbach's alpha=0.72), self-blame (Cronbach's alpha=0.63) , emotional containment (Cronbach's alpha=0.82), wishful thinking (Cronbach's alpha=0.52), passive resignation (Cronbach's alpha=0.50), and religious faith (Cronbach's alpha=0.93). In addition, a low reliability was found for the other-blame coping subscale (Cronbach's alpha=0.26). Given that a deletion of an item yielded an even lower reliability for the subscale, the other-blame coping subscale was excluded from further analyses.

3.0 RESULTS

3.1 The Unique Contributions of Coping

In order to assess the unique contribution of coping over and above that of personality, a set of hierarchical regression analyses were conducted, where the psychological well-being domains and perception of training stress were regressed onto the five personality subscales at the first step followed by the coping subscales at the second step.

3.1.1 Personality, Coping, and Life Satisfaction

Coping improved the prediction of life satisfaction, R^2 = .122, F (13, 171) = 2.33, p<.01 (Table 1). Two coping strategies served as unique predictors of life satisfaction when the other coping strategies and personality subscales were statistically controlled. Specifically, cognitive restructuring and religious faith remained positively associated with life satisfaction. However, personality became non-significant when the variance shared with coping was statistically controlled, suggesting that coping was the primary predictor of life satisfaction.

Table 1: Multiple Regression Analyses Assessing the Role of Coping and Personality in the Life Satisfaction of OCdts

	Pearson r	***β***	***R^2***
Step 1. Personality			**.190*** **
Neuroticism	-.36***	-.16	
Extraversion	.28***	.08	
Openness	-.12	-.08	
Agreeableness	.21**	.07	
Conscientiousness	.25***	.07	
Step 2. Coping			**.122****
Problem-solving	.15*	-.12	
Cognitive restructuring	.22**	.29**	
Active distraction	.07	.03	
Avoidance	-.09	.06	
Rumination	-.20**	.01	
Humour	.14*	-.02	
Social support seeking	.14*	.10	
Emotional expression	-.23**	-.13	
Self-blame	-.23**	-.17	
Emotional containment	-.24***	.00	
Wishful thinking	-.24***	-.09	
Passive resignation	-.20**	-.13	
Religious faith	.19**	.15*	

*p<.05; **p<.01;***p<.001

3.1.2 Personality, Coping, and Health Symptoms

Coping improved the prediction of health symptoms, R^2 = .135, F (13, 171) = 3.16, p<.001 (Table 2). One coping strategy served as a unique predictor of health symptoms when the other coping strategies and personality subscales were statistically controlled. Specifically, active distraction was positively associated with greater health of CF OCdts. In addition, neuroticism served as a unique predictor of health symptoms when the other personality traits and coping strategies were statistically controlled. Therefore, both neuroticism and active distraction independently predicted health symptoms, suggesting that they were equally important predictors of health.

Table 2: Multiple Regression Analyses Assessing the Role of Coping and Personality in the Health Symptoms of OCdts

	Pearson r	***B***	***R^2***
Step 1. Personality			**.300*** **
Neuroticism	-.53***	-.21*	
Extraversion	.26***	.00	
Openness	.00	.02	
Agreeableness	.20**	.06	
Conscientiousness	.27***	.11	
Step 2. Coping			**.135*** **
Problem-solving	.18**	.09	
Cognitive restructuring	.05	.02	
Active distraction	.27***	.28***	
Avoidance	-.22**	-.08	
Rumination	-.45***	-.21	
Humour	.06	-.02	
Social support seeking	-.08	-.06	
Emotional expression	-.35***	-.13	
Self-blame	-.17**	-.06	
Emotional containment	-.37***	-.09	
Wishful thinking	-.27***	.07	
Passive resignation	-.25***	-.03	
Religious faith	-.01	-.01	

*p<.05; **p<.01; ***p<.001

3.1.3 Personality, Coping, and Training Stress

Coping improved the prediction of training stress perception, R^2 = .122, F (13, 171) = 2.16, p<.05 (Table 3). Two coping strategies served as unique predictors of training stress when the other coping strategies and personality subscales were statistically controlled. Specifically, active distraction was negatively associated with training stress, while religious faith was positively associated with training stress. However, personality became non-significant when the variance shared with coping was statistically controlled, suggesting that coping was the primary predictor of training stress perception.

Table 3: Multiple Regression Analyses Assessing the Role of Coping and Personality in the Training Stress of OCdts

	Pearson r	***B***	R^2
Step 1. Personality			**.136*** **
Neuroticism	.35***	.15	
Extraversion	-.16*	-.05	
Openness	-.03	.00	
Agreeableness	-.01	-.01	
Conscientiousness	-.03	.01	
Step 2. Coping			**.122***
Problem-solving	.05	.03	
Cognitive restructuring	.11	.08	
Active distraction	-.14*	-.19*	
Avoidance	.19**	.07	
Rumination	.29***	.08	
Humour	-.05	-.07	
Social support seeking	.22**	.13	
Emotional expression	.31***	.16	
Self-blame	.10	-.04	
Emotional containment	.19**	.05	
Wishful thinking	.21**	-.06	
Passive resignation	.22**	.08	
Religious faith	.23**	.18*	

*p<.05; **p<.01;***p<.001

3.2 Personality and Psychological Well-Being: The Moderating Role of Coping

In order to examine the proposed interactions between personality and coping, a set of hierarchical regression analyses were conducted, where each domain of psychological well-being was regressed onto the personality and coping domains in the first step, followed by the interaction terms of personality and coping in the second step. Given that neuroticism and agreeableness were the only subscales of personality that served as unique predictors of psychological well-being, they were the only personality subscales that were included in these analyses. The coping strategies that were not correlated with psychological well-being were not used in these analyses.

3.2.1 Personality and Life Satisfaction: The Moderating Role of Coping

The interaction between neuroticism and coping improved the prediction of life satisfaction, R^2 = .078, F (11, 166) = 1.86, p<.05 (Table 4). The interactions between neuroticism and problem-solving, rumination, humour, and religious faith were significantly correlated with life satisfaction. In addition, cognitive restructuring, problem-solving, humour and social support were found to serve as unique predictors. Given that the zero-order correlations for cognitive restructuring and social support coping strategies were not significant, it seems that there was a suppressor effect, rather than these interactions serving as true unique

predictors. Therefore, the interactions between neuroticism and humour as well as between neuroticism and problem-solving were the only unique predictors of life satisfaction. Specifically, for low levels of humour, the negative effect of neuroticism on life satisfaction was significant (β = -.53, p<.001), whereas for high levels of humour, the negative effect of neuroticism on life satisfaction was not significant (β = -.15, ns). In other words, humour served as a buffer, significantly reducing the negative impact of neuroticism on life satisfaction (Figure 1).

Table 4: Hierarchical Regression Analyses Assessing the Moderating Role of Coping in the Path between Neuroticism and Life Satisfaction of OCdts

	Pearson r	***β***	***R^2***
Step 2. Neuroticism and Coping Interactions			**.078***
Neuroticism & Problem-solving	-.34***	-.18*	
Neuroticism & Cognitive restructuring	.02	-.19*	
Neuroticism & Rumination	-.14*	-.07	
Neuroticism & Humour	.17*	.28**	
Neuroticism & Social support seeking	.09	.16*	
Neuroticism & Emotional expression	-.11	.02	
Neuroticism & Self-blame	-.04	.10	
Neuroticism & Emotional containment	-.08	.04	
Neuroticism & Wishful thinking	-.09	-.13	
Neuroticism & Passive resignation	.05	.06	
Neuroticism & Religious faith	.12*	.12	

*p<.05; **p<.01; ***p<.001

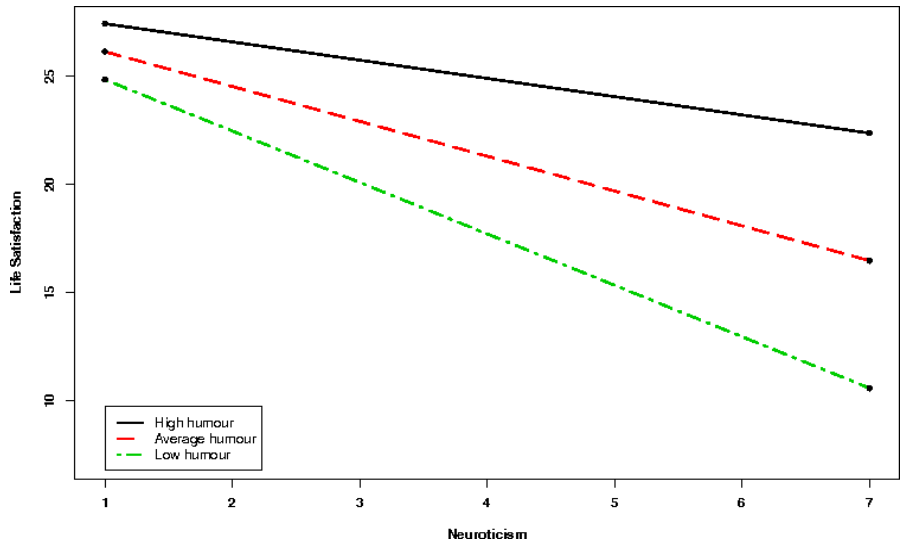

Figure 1: The Moderating Role of Humour in the Path between Neuroticism and Life Satisfaction

In addition, for low levels of problem-solving, the negative effect of neuroticism on life satisfaction was significant (β = -.45, p<.001), whereas for high levels of problem-solving, the negative effect of neuroticism on life satisfaction was not significant (β = -.15, ns). In other words, the problem-solving coping strategy served as a buffer, significantly reducing the negative impact of neuroticism on life satisfaction (Figure 2).

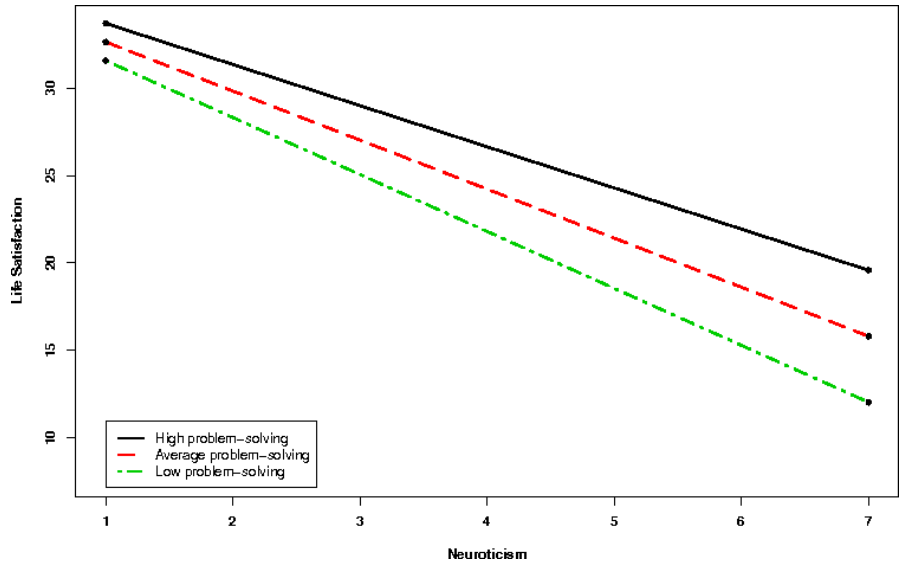

Figure 2: The Moderating Role of PS coping in the Path between Neuroticism and Life Satisfaction

Furthermore, the interaction between agreeableness and coping did not significantly improve the prediction of life satisfaction among OCdts, R^2 = .045, F < 1, *ns* (Table 5), suggesting that coping did not moderate the path between agreeableness and life satisfaction.

Table 5: Multiple Regression Analyses Assessing the Moderating Role of Coping in the Path between Agreeableness and Life Satisfaction of OCdts

	Pearson r	***B***	***R^2***
Step 2. Agreeableness and Coping Interactions			**.045**
Agreeableness & Problem-solving	.24***	.06	
Agreeableness & Cognitive restructuring	.04	.09	
Agreeableness & Rumination	.03	.11	
Agreeableness & Humour	.06	-.01	
Agreeableness & Social support seeking	.03	.05	
Agreeableness & Emotional expression	-.11	.02	
Agreeableness & Self-blame	-.00	.03	
Agreeableness & Emotional containment	-.11	-.00	
Agreeableness & Wishful thinking	-.10	-.12	
Agreeableness & Passive resignation	-.05	-.15	
Agreeableness & Religious faith	-.08	-.15*	

*p<.05; **p<.01; ***p<.001

3.2.2 Personality and Health Symptoms: The Moderating Role of Coping

The interaction between neuroticism and coping did not significantly improve the prediction of health symptoms among OCdts, R2 = .047, F (9, 170) = 1.66, ns (Table 6), suggesting that coping did not moderate the path between neuroticism and health symptoms.

Table 6: Multiple Regression Analyses Assessing the Moderating Role of Coping in the Path between Neuroticism and Health Symptoms of OCdts

	Pearson r	***β***	***R^2***
Step 2. Neuroticism and Coping Interactions			**.047**
Neuroticism & Problem-solving	.26***	.11	
Neuroticism & Active distraction	.08	-.03	
Neuroticism & Avoidance	-.00	.14	
Neuroticism & Rumination	-.09	-.25**	
Neuroticism & Emotional expression	-.08	.15	
Neuroticism & Self-blame	.04	.15	
Neuroticism & Emotional containment	-.10	.00	
Neuroticism & Wishful thinking	-.05	-.17	
Neuroticism & Passive resignation	.05	.06	

*p<.05; **p<.01; ***p<.001

In addition, the interaction between agreeableness and coping did not significantly improve the prediction of health symptoms among OCdts, R2 = .040, F (9, 170) = 1.34, ns (Table 7), suggesting that coping did not moderate the path between agreeableness and health symptoms.

Table 7: Multiple Regression Analyses Assessing the Moderating Role of Coping in the Path between Agreeableness and Health Symptoms of OCdts

	Pearson r	***β***	***R^2***
Step 2. Agreeableness and Coping Interactions			**.040**
Agreeableness & Problem-solving	.26***	.14	
Agreeableness & Active distraction	.08	-.03	
Agreeableness & Avoidance	-.00	.14	
Agreeableness & Rumination	-.09	-.23*	
Agreeableness & Emotional expression	-.08	.16	
Agreeableness & Self-blame	.04	.12	
Agreeableness & Emotional containment	-.10	-.01	
Agreeableness & Wishful thinking	-.05	-.12	
Agreeableness & Passive resignation	.05	.03	

*p<.05; **p<.01; ***p<.001

3.2.3 Personality and Training Stress: The Moderating Role of Coping

The interaction between neuroticism and coping did not significantly improve the prediction of training stress among OCdts, R^2 = .035, F < 1, *ns* (Table 8), suggesting that coping did not moderate the path between neuroticism and training stress.

Table 8: Multiple Regression Analyses Assessing the Moderating Role of Coping in the Path between Neuroticism and Training Stress of OCdts

	Pearson r	***β***	***R^2***
Step 2. Neuroticism and Coping Interactions			**.035**
Neuroticism & Cognitive restructuring	-.02	.02	
Neuroticism & Active distraction	-.09	-.07	
Neuroticism & Avoidance	.02	-.04	
Neuroticism & Rumination	.05	-.20	
Neuroticism & Social support seeking	.00	.06	
Neuroticism & Emotional expression	.15*	.05	
Neuroticism & Wishful thinking	-.01	-.01	
Neuroticism & Passive resignation	.06	.15	
Neuroticism & Religious faith	-.10	-.11	

*p<.05; **p<.01; ***p<.001

In addition, the interaction between agreeableness and coping significantly improved the prediction of training stress among OCdts, R^2 = .094, F (10, 167) = 2.36, p<.05 (Table 9). The interactions between agreeableness and cognitive restructuring, active distraction, and social support seeking were negatively correlated with training stress among new recruits. However, no interaction served as a unique predictor of training stress over and above the main effects of agreeableness and coping. In other words, overall coping moderated the path between agreeableness and training stress, but no specific coping strategy could be identified as a unique predictor.

Table 9: Multiple Regression Analyses Assessing the Moderating Role of Coping in the between Agreeableness and Training Stress of OCdts

	Pearson r	*β*	R^2
Step 2. Agreeableness and Coping Interactions			**.094***
Agreeableness & Cognitive restructuring	-.26***	-.12	
Agreeableness & Active distraction	-.27***	-.14	
Agreeableness & Avoidance	-.08	.08	
Agreeableness & Rumination	-.03	.17	
Agreeableness & Social support seeking	-.21**	-.14	
Agreeableness & Emotional expression	.05	.06	
Agreeableness & Emotional containment	.07	.02	
Agreeableness & Wishful thinking	-.10	-.07	
Agreeableness & Passive resignation	-.15*	-.11	
Agreeableness & Religious faith	.13*	.11	

*p<.05; **p<.01; ***p<.001

3.3 Neuroticism and Psychological Well-Being: The Mediating Role of Coping

This set of analyses assessed the mediating role of coping in the path between neuroticism and psychological well-being. Bootstrapping analyses were conducted to examine the mediating role of coping in the path between neuroticism and psychological well-being.

3.3.1 Neuroticism and Life Satisfaction: The Mediating Role of Coping

The indirect effect of neuroticism on life satisfaction scores was significant with coping included in the equation (Table 10). However, the direct effect of neuroticism on life satisfaction was still significant when coping was statistically controlled. Moreover, the 95% confidence interval for the total mediation effect included zero, suggesting that coping did not mediate the relation between neuroticism and life satisfaction. Thus, increased levels of neuroticism were directly predictive of lower levels of life satisfaction.

Table 10: The Mediating Role of Coping in the Path between Neuroticism and Life Satisfaction: Results of Bootstrap Analysis

	Coefficient	SE	t	P
Direct effect of mediators on DV				
Problem-solving	-.42	.41	-1.04	.2998
Cognitive restructuring	1.37	.41	3.3	.0011
Active distraction	.18	.34	.53	.5944
Avoidance	.39	.37	1.07	.2883
Rumination	.02	.39	.05	.9598
Humour	.01	.34	.03	.9747
Social support seeking	.52	.34	1.51	.1328
Emotional expression	-.43	.39	-1.11	.2646
Self-blame	-.80	.38	-2.12	.0358
Emotional containment	-.13	.38	-.34	.7336
Wishful thinking	-.51	.41	-1.24	.2176
Passive resignation	.86	.32	2.72	.0072
Religious faith				
Indirect effects (through mediators) of neuroticism on life satisfaction	-1.62	.31	-5.21	.0000
Direct effects of neuroticism on life satisfaction	-1.00	.41	-2.43	.0159
	Bootstrapping 95% CI			
	Lower	**Upper**		
Problem-solving (mediator)	-.0282	.2601		
Cognitive restructuring (mediator)	-.2302	.1902		
Active distraction (mediator)	-.1530	.0282		
Avoidance (mediator)	-.0847	.3773		
Rumination (mediator)	-.3638	.4184		
Humour (mediator)	-.1217	.0890		
Social support seeking (mediator)	-.0128	.2313		
Emotional expression (mediator)	-.6698	.1545		
Self-blame (mediator)	-.5438	-.0282		
Emotional containment (mediator)	-.4396	.2855		
Wishful thinking (mediator)	.6413	.1447		
Passive resignation (mediator)	-.3911	.0100		
Religious faith (mediator)	-.0385	.2423		
TOTAL (coping)	-1.3859	.0054		

3.3.2 Neuroticism and Health Symptoms: The Mediating Role of Coping

The indirect effect of neuroticism on health scores was significant with coping included in the equation (Table 11). However, the direct effect of neuroticism on health symptoms was still significant when coping was statistically controlled for. The 95% confidence interval for the mediation effect did not include zero, and so it appears that coping partially mediated the relation between neuroticism and health symptoms. Rumination was the only coping strategy that was found to significantly mediate the path between neuroticism and health. Thus, increased levels of neuroticism were directly predictive of lower levels of health symptoms. In addition, increased levels of neuroticism were associated with an adoption of a rumination coping strategy, which, in turn, was associated with lower health symptoms.

Table 11: The Mediating Role of Coping in the Path between Neuroticism and Health Symptoms: Results of Bootstrap Analysis

	Coefficient	SE	T	P
Direct effect of mediators on DV				
Problem-solving	.66	.42	1.56	.1196
Cognitive restructuring	.18	.43	.43	.6710
Active distraction	1.47	.36	4.14	.0001
Avoidance	-.38	.38	-.99	.3222
Rumination	-1.04	.41	-2.53	.0124
Humour	-.19	.36	-.53	.5998
Social support seeking	-.32	.36	-.91	.3638
Emotional expression	-.64	.41	-1.56	.1207
Self-blame	-.43	.39	-1.09	.2769
Emotional containment	-.51	.40	-1.27	.2044
Wishful thinking	.33	.43	.76	.4456
Passive resignation	-.17	.34	-.48	.6289
Religious faith	.06	.33	.20	.8436
Indirect effects (through mediators) of neuroticism on health symptoms	-2.78	.33	-8.52	.0000
Direct effects of neuroticism on health symptoms	-1.34	.43	-3.12	.0021
	Bootstrapping 95% CI			
	Lower	**Upper**		
Problem-solving (mediator)	-.3369	.0163		
Cognitive restructuring (mediator)	-.0938	.0623		
Active distraction (mediator)	-.3238	.0954		
Avoidance (mediator)	-.4387	.1161		
Rumination (mediator)	-1.0489	-.0035		
Humour (mediator)	-.0465	.1718		
Social support seeking (mediator)	-.2156	.0343		
Emotional expression (mediator)	-.8784	.1426		
Self-blame (mediator)	-.3586	.0875		
Emotional containment (mediator)	-.5826	.1388		
Wishful thinking (mediator)	-.3203	.6129		
Passive resignation (mediator)	-.2562	.1102		
Religious faith (mediator)	-.0507	.1091		
TOTAL (coping)	-2.2359	-.6502		

3.3.3 Neuroticism and Training Stress: The Mediating Role of Coping

The indirect effect of neuroticism on perception of training stress was significant with coping included in the equation (Table 12). However, the direct effect of neuroticism on training stress became insignificant when coping was statistically controlled for. Furthermore, the 95% confidence interval for the mediation effect did not include zero, suggesting that coping fully mediated the relation between neuroticism and perception of training stress. Religious faith was the only coping strategy that was found to significantly mediate the path between neuroticism and perception of training stress. Thus, increased levels of neuroticism were associated with the adoption of a religious faith coping strategy, which, in turn, was associated with greater training stress perception.

Table 12: The Mediating Role of Coping in the Path between Neuroticism and Perception of Training Stress

	Coefficient	**SE**	**t**	**P**
Direct effect of mediators on DV				
Problem-solving	.03	.09	.31	.7574
Cognitive restructuring	.08	.09	.87	.3800
Active distraction	-.19	.08	-2.46	.0148
Avoidance	.06	.08	.67	.5000
Rumination	.08	.09	.87	.3875
Humour	-.09	.08	-1.13	.2609
Social support seeking	.12	.08	1.52	.1307
Emotional expression	.15	.09	1.73	.0849
Self-blame	-.04	.09	-.42	.6766
Emotional containment	.06	.09	.71	.4800
Wishful thinking	-.06	.09	-.62	.5363
Passive resignation	.08	.08	1.11	.2698
Religious faith	.19	.07	2.67	.0082
Indirect effects (through mediators) of neuroticism on training stress	.35	.07	5.08	.0000
Direct effects of neuroticism on training stress	.15	.09	1.63	.1036
	Bootstrapping 95% CI			
	Lower	**Upper**		
Problem-solving (mediator)	-.0425	.0196		
Cognitive restructuring (mediator)	-.0299	.0150		
Active distraction (mediator)	-.0131	.0474		
Avoidance (mediator)	-.0403	.0771		
Rumination (mediator)	-.0606	.1365		
Humour (mediator)	-.0045	.0481		
Social support seeking (mediator)	-.0024	.0573		
Emotional expression (mediator)	-.0273	.1973		
Self-blame (mediator)	-.0682	.0401		
Emotional containment (mediator)	-.0653	.1156		
Wishful thinking (mediator)	-.1164	.0510		
Passive resignation (mediator)	-.0196	.0834		
Religious faith (mediator)	.0095	.0492		
TOTAL (coping)	.0547	.3408		

4.0 DISCUSSION

The first goal of this study was to examine the unique role of coping in psychological well-being, over and above that of personality. Consistent with the study hypothesis, coping played a significant and unique role in predicting psychological well-being. As expected, coping styles appeared to represent a resistance factor in relation to psychological well-being problems, in that problem-solving and active coping (i.e., active distraction) were related to better psychological well-being or lower training stress, whereas emotion-focused coping (e.g., emotional expression, self-blame, and rumination) was related to poorer psychological well-being or greater training stress. This finding is consistent with other research, which has previously demonstrated that emotion-focused coping is associated with poorer, whereas problem-focused coping is associated with better psychological well-being [51, 52, 53]. Thus, although the use of avoidant and emotional coping strategies may be adaptive in some situations, especially as an immediate response to some traumatic events, over-reliance on or long-term use of these strategies may be a vulnerability factor in the development of psychological health problems [54, 55, 56].

It was also found in the present study that coping played an important role in the perception of training stress. Specifically, active distraction predicted lower training stress, whereas rumination and religious faith strategies predicted greater training stress. This finding is in line with previous research results [57, 58], which demonstrated an important and negative role of emotional coping in the perception of greater stress. The findings regarding the religious faith coping strategy seemed to be inconsistent: on one hand, religious faith was found to be associated with greater life satisfaction, but on the other hand, it was associated with greater training stress. The positive role of religious faith is consistent with previous research [e.g., 59, 60] showing that individuals higher in religious coping are likely to be more satisfied with their lives than others. While it is not clear why religious faith would increase training stress, it is possible that the nature of basic military training (e.g., acceptance of killing one's enemy) might conflict with religious beliefs for some. Rosmarin, Krumrei, and Andersson [61] argued that links between religion and psychological distress are complex. Their research results indicated that while positive religious core beliefs predicted better psychological well-being, negative religious core beliefs predicted greater distress. Therefore, it is possible that the religious faith coping strategy measured is a poor predictor of psychological well-being and perception of training stress, since it only assesses the presence of religious beliefs. Specific religious core beliefs should be assessed in order to better understand the path between religious faith and psychological well-being and perception of stress.

It is important to note that, although social support seeking was found to be associated with psychological well-being, it did not serve as a predictor of psychological well-being or perception of training stress. One of the explanations for this could be that peers may not be as attentive to or understanding of the emotional needs of a person they recently met in order to provide adequate social support. Indeed, seeking social support and obtaining social support were found to be two separate concepts [e.g., 62]. Similarly, Sandal et al. [63] suggested that the competitive, highly charged military environment may not encourage the sharing of personal concerns, decreasing both the likelihood of social support seeking behaviour and the effectiveness of using it. In addition, as a part of the BOTC, trainees provide peer-review assessments of leadership qualities. OCdts may be less likely to seek social support or otherwise display "weakness" while being evaluated for their leadership qualities. It seems that both personality and coping play important and independent roles in the psychological well-being and perception of training stress of CF OCdts.

The second goal of the study was to identify the way in which coping influences the path between personality and psychological well-being. Results of the present study provided partial evidence for the differential-coping effectiveness model, suggesting that coping may moderate the path between personality and psychological well-being. According to this model, the coping strategies that an individual adopts to deal with stress can either buffer the path between some personality traits and

psychological well-being or increase the risk for psychological health problems. Consistent with the hypothesis, problem-solving and humour were found to moderate the path between personality (i.e., neuroticism) and life satisfaction. Consistent with this, Sandal *et al*. [63] found that problem-solving coping was associated with better functioning during high-stress submarine missions. It seems that while coping partially moderates the path between personality and psychological well-being, its direct role in psychological well-being is more profound. An alternative explanation for the interrelationships between personality, coping, and psychological well-being is the differential coping-choice model, which has been based on the previous evidence that personality has a significant influence on the coping strategies used to deal with stressors [e.g., 64]. According to this model, coping would mediate the path between personality and psychological well-being. This hypothesis was again only partially supported in this study. Coping (i.e., rumination) served as a partial mediator between neuroticism and health symptomatology. In addition, coping (i.e., religious faith) served as a full mediator between neuroticism and perception of training stress. Increased levels of neuroticism were associated with the adoption of rumination and religious faith coping strategies, which, in turn, were predictive of poorer health symptomatology or a perception of greater training stress.

Therefore, the present findings provided partial support for both the differential coping-choice and the differential coping-effectiveness models. While neuroticism influenced the adoption of some unhealthy coping strategies (e.g., rumination), not all coping strategies that neurotic individuals used were unhealthy. If neurotic individuals used problem-solving or humour to deal with stress, their psychological well-being was better compared to other neurotic individuals. Therefore, whereas personality defines some coping choices, other coping strategies are independent of personality and can either make individuals more vulnerable or buffer the impact of personality on their psychological well-being and perception of training stress. These findings provided support for the *differential choice-effectiveness model*, as defined by Bolger and Zuckerman [30], which incorporates both the differential coping choice and differential coping effectiveness models. According to this model, personality traits influence the adoption of certain coping strategies, which may be adaptive (or maladaptive) for some individuals but not others. According to this model, it is important to take into account both the mediating and the moderating components of coping function when discussing the path between personality and psychological well-being.

The distinction between the differential coping-choice and the differential coping-effectiveness models has important implications for the military organization in terms of both selection and intervention strategies. Although personality testing for personnel selection purposes was argued to be effective in selecting more psychologically resilient individuals into the stressful military environment [e.g., 8, 9], if it were possible to train individuals to cope better with stress, it would be unnecessary to select out potentially successful CF candidates. Present findings demonstrate that at least some coping strategies are independent of personality style and, therefore, are more prone to change. Moreover, it was previously suggested that both stress appraisals and coping patterns could be affected by training [for review, see cognitive behavioural modification model outlined in 65, 66]. While there has been no evidence that humour can be trained, despite the recognition of its valuable role in psychological well-being [67], research demonstrates that problem-solving coping can be enhanced with training [68, 69, 70]. The results of the present study suggest that providing stress and coping training (especially in the area of problem-solving coping) to CF candidates would be beneficial – it would reduce training stress, improve psychological well-being among candidates, and increase retention in the CF. Such training should provide CF candidates with more information on various adaptive coping strategies that may be used to deal with basic training stress.

4.1 Limitations

There are several limitations that should be taken into account when interpreting the results of this study. Although previous evidence is supportive of the role of coping in psychological well-being [e.g., 32, 30, 33, 35], given the correlational nature of the present study, some caution should be merited, especially in making a cause and effect interpretation. It is also possible that individuals with psychological health

problems (e.g., low life satisfaction or poor health) develop emotion-focused strategies for coping (e.g., avoiding their own health problems or dissatisfaction or rumination about them), and, alternatively, these processes might be both caused by a third factor resulting in a spurious relation. Second, it is important to take into account that the personality of the OCdts was measured while they were taking their BOTC. Although personality is considered to be stable by most personality researchers [e.g., 71, 72, 73], it is still possible that a stressful event, such as BOTC, affects an individual's personality. Given that BOTC is very structured and leadership behaviours are being assessed, some of the personality traits might have been temporarily elevated given the priming effect of the training. Specifically, it has been previously found that neuroticism decreased and conscientiousness increased during basic military training [74]. Therefore, for future research, it will be important to seek an opportunity to collect personality and hardiness data on candidates before they start their BOTC.

Finally, due to the low number of females in this study, examining sex differences with respect to personality, coping, and psychological well-being concepts was not possible. Previous research suggests that there are significant personality differences between men and women in that women demonstrate higher scores on neuroticism [75, 76, 77, 78]. Furthermore, gender differences have been previously found on coping [25, 79, 80, 81, 58], suggesting that men and women may use different strategies under stress. Finally, previous research has demonstrated that women reported higher scores on psychological well-being than men [82]. Therefore, future research should stratify for gender in order to examine potential differences in personality and coping as well as in the paths between personality and psychological well-being and coping and psychological well-being among men and women in the CF.

4.2 Conclusion

The overall goal of the study was to understand the multifaceted relationships between personality, coping with stress, and psychological well-being in the military context. Consistent with previous research, coping seems to play an important role in psychological well-being of CF OCdts, over and above personality. Therefore, providing coping training to OCdts could be beneficial. There is evidence that coping patterns can be affected with training [65]. Furthermore, it has already been suggested that coping training should be provided to military personnel [83]. However, future research should consider and examine the best coping training method. For example, future research should examine whether the intervention should focus on helping the individuals to choose effective coping strategies or to increase the effectiveness of the coping strategies these individuals already employ [30]. Training, focusing on the effectiveness of particular coping strategies (e.g., problem-solving and social support seeking), could be offered to individuals starting their basic training. In addition, training that focuses on stress management and coping, including approaches of setting priorities to balance work and family within the context of the military environment could be offered [e.g., 84]. For example, Jones, Perkins, Cook, and Ong [85] describe the results of the intensive coping skills training program that was provided to military personnel by the Mental Health Department of the U.S. Naval Hospital in Japan. The results of their study demonstrated that the program was effective in reducing depression and anxiety symptoms and promoting healthy coping behaviors among participants.

Future research should continue to examine the complex role of coping in the path between personality and psychological well-being while taking into account the limitations of the present study. Specifically, future studies should examine potential differences between male and female CF candidates on personality and coping scales. Were gender differences found, it would have important implications for the military organization and coping training. Military men may potentially be at even greater need than women to obtain coping training, as men are less likely to adopt certain effective coping strategies, such as social support seeking, to deal with stress. Consistent with this, Bray *et al*., [84] suggested that even though the military is a predominantly male organization that puts considerable emphasis on physical fitness and, therefore, may convey an image of a macho organization, military men are at least as likely as women to need interventions to ameliorate the effects of stress.

Finally, future research should expand the findings by introducing other important factors that may contribute to the process of coping with stress (e.g., availability and usage of social support) and examine other types of important organizational outcomes, such as physical health and job and training performance. In addition, the mediating role of stress appraisals should be incorporated into the current personality, coping, and psychological well-being models. It is possible that the paths between personality, coping, and psychological well-being differ based on the level of stress experienced.

Psychological health problems in high-stress military jobs are costly to both the individual and the organization. As indicated by the findings of this study, both personality characteristics and coping strategies are strong determinants of psychological well-being and perception of training stress among CF candidates. These findings should be taken into account when developing policy and intervention strategies that would reduce basic training stress and enhance psychological well-being of CF members.

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